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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------|-------------|----------------------|---------------------|------------------|
| 10/661,492 | 09/15/2003 | Chu-Ting Su | TOP 325 | 9226 |
| 23995 | 7590 | 06/04/2007 | EXAMINER | |
| RABIN & Berdo, PC | | | LAO, LUN S | |
| 1101 14TH STREET, NW | | | | |
| SUITE 500 | | | ART UNIT | PAPER NUMBER |
| WASHINGTON, DC 20005 | | | 2615 | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|----------------------------------|--|
| Office Action Summary | Application No. 10/661,492 | Applicant(s) SU ET AL. | |
| | Examiner Lun-See Lao | Art Unit 2615 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ 5) <input type="checkbox"/> Notice of Informal Patent Application 6) <input type="checkbox"/> Other: _____ |
|---|--|

DETAILED ACTION

Introduction

1. This action is in response to the 10/661,492 application filed on 09-15-2003. Claims 1-23 are pending.

Specification

2. The following title is suggested: Apparatus for automatic identification of audio input/output device and method thereof

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Adams (US PAT. 6,594,366).

Consider claim 1 Adams teaches that an apparatus (see fig.1) for automatic identification of an external audio input/output device, comprising:

an audio jack (see fig.1 (120) and see col. 2 line 20-47);

a detecting device (see figs 3-4 (210)) for automatically identifying the external device according to an impedance of the external device (210a) connected through the audio jack (210), and

generating a control signal (208); and

a multiplexer (203) for selectively coupling the external device to one of a plurality of audio circuits according to the control signal (see col.3 line 45-col. 4 line 45).

Consider claim 12 it is essentially similar to claim 1 and is rejected for the reason stated above apropos to claim 1.

Consider claims 2-5 Adams teaches that the external device (see fig.3 (210) is for inputting an audio signal or outputting an audio signal (106,108); and detecting device and the external device (see fig.4 (210a)) are connected to be a potential divider, and the control signal is the voltage signal outputted from one of a plurality of dividing points of the potential divider (see col. 3 line 45-col. 4 line 45); and the detecting device (see fig.4 (210a)) is for selectively connecting one of a plurality of resistors of the detecting device to form the potential divider(see col. 3 line 45-col. 4 line 45); and apparatus of further comprising an Analog to Digital Converter (ADC) for converting the control signal to be a digital signal (see col. 3 line 16-28).

Consider claim 20 it is essentially similar to claim 3 and is rejected for the reason stated above apropos to claim 3.

Consider claims 6-8 Adams teaches the apparatus of further comprising a controlling unit (see fig. 3, (208)) for determining the type of the external device (210) according to the digital control signal, and the multiplexer (203) selectively couple the external device

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(210) to the audio input circuit or the audio output circuit via the audio jack (210) according to the digital control signal (see col. 3 line 45-col. 4 line 45); and the controlling unit (see fig.4 (208)) disconnects the connection between the detecting device and the external device (210) according to the digital controlling data(see col. 3 line 45-col. 4 line 45); and the controlling unit (see fig.4 (208)) is for detecting whether or not the external device (210) is connected to the audio jack (210), and controlling the connection between the detecting device and the external device accordingly(see col. 3 line 45-col. 4 line 45).

Consider claims 14 and 21 they are essentially similar to claim 7 and are rejected for the reason stated above apropos to claim 7.

Consider claims 9-11 Adams teaches that the detecting device (see fig.4 (210a)) determines the type of the external device through comparing the impedance of the external device with a recognition parameter (see col. 4 line 8-45); and the recognition parameter is stored in a registry, or a programmable memory, or a software file inherently (because by the control processor 208 and see fig.2 and col. 3 line 5-45) and each of the audio circuits (see fig.3) is either an audio input circuit or an audio output circuit (106,108 and see col. 4 line 8-45).

Consider claims 16-18 they are essentially similar to claims 9-11 and are rejected for the reason stated above apropos to claims 9-11.

Consider claim 23 it is essentially similar to claim 11 and is rejected for the reason stated above apropos to claim 11.

Consider claims 13 and 15 Adams teaches that the step of measuring further comprises the steps of: connecting a detecting circuit (see fig.4 (210a)) with the external device to form a potential divider; measuring an output voltage of the potential divider; and converting the output voltage to the controlling signal (see fig.3 (208) and see col. 3 line 45-col. 4 line 45); and the step of formation the potential divider (see fig.4 (210)) further comprises selectively connecting one of a plurality of resistors to the external device individually (see fig.3 and see col. 3 line 45-col. 4 line 45).

Consider claim 22 it is essentially similar to claim 15 and is rejected for the reason stated above apropos to claim 15.

Consider claim 19 Adams teaches that a method for automatically identifying an external audio input/output device, comprising the steps of (see fig.1):

detecting whether the external device is connected to an audio jack (see figs.3-4 (210));

measuring an impedance of the external device (210); converting the measured impedance to a corresponding controlling signal; and selectively coupling one of a plurality of audio circuits (203) to the external device via the audio jack according to the controlling signal (see fig.3 (208) and see col. 3 line 45-col. 4 line 45).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ito (US PAT. 6,203,344) is cited to show other related apparatus for automatic identification of audio input/output device and method thereof.

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6. Any response to this action should be mailed to:

Mail Stop ____ (explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Facsimile responses should be faxed to:
(571) 273-8300

Hand-delivered responses should be brought to:
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao, Lun-See whose telephone number is (571) 272-7501. The examiner can normally be reached on Monday-Friday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian, can be reached on (571) 272-7848.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (571) 272-2600.

Lao, Lun-See *LS*
Patent Examiner
US Patent and Trademark Office
Knox
571-272-7501
Date 05-18-2007


VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600